IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Kay-Yut Chen	§	Art Unit:	3623
		§		
Serial No.:	09/944,969	§	Confirmation No.:	2217
		§		
Filed:	August 30, 2001	§	Examiner:	David Robertson
		§		
For:	Method and Apparatus for	§	Atty. Dkt. No.:	10004567-1
	Modeling Business Processes	§		(HPC.0328US)

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF

Sir:

The following sets forth Appellant's Reply to the Examiner's Answer dated December 16, 2009.

In response to the Examiner's Answer, in which new grounds of rejection were identified, Appellant respectfully requests that the appeal be maintained. The new grounds of rejection are addressed in the Reply Brief below.

STATUS OF CLAIMS

Claims 1-23 are pending.

GROUNDS OF REJECTIONS TO BE REVIEWED ON APPEAL

Claims 1-9, 18-21, and 23 were rejected under 35 U.S.C. § 101 based on Supreme Court precedent, and recent Federal Circuit decisions.

Claims 10-17 and 22 were rejected under 35 U.S.C. § 101 because the claimed invention encompasses non-statutory subject matter.

Claims 10-17 and 22 were rejected under 35 U.S.C. § 112, ¶ 2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-23 were rejected under 35 U.S.C. § 103(a) as unpatentable over Chaturvedi et al., "Synthetic Economies: The Application of Distributed Interactive Computing Environments for Policy and Management Decision Making," Institute for Defense Analyses (Chaturvedi/IDA) with Mehta, "Simulations in Economics and Management," Communication of the ACM (Chaturvedi/ACM), and further in view of U.S. Patent No. 6,405,173 (Honarvar), P.R. Sugges, "The Use of Computerized Business Games to Simulate Business Behavior Under Different Policies," IEEE 1979 Winter Simulation Conference (Sugges)," and U. Fischbacher, "z-Tree – Zurich Toolbox for Readymade Economic Experiments – Experimenter's Manual," Institute for Empirical Research in Economics (Fischbacher).

ARGUMENT

A.   **SECTION 101 REJECTION OF CLAIMS 1-9, 18-21, AND 23**

The Examiner argued that independent method claims 1 and 18 do not recite statutory subject matter since these claims do not transform subject matter or are not tied to a machine or apparatus. 12/16/2009 Examiner's Answer at 4.

Appellant respectfully disagrees. It is noted that the "providing" element of claim 1 recites providing player definitions defining a plurality of **players** and an associated set of rules. As explained by the specification, the "players" can be humans or computers. Thus, the player definitions of claim 1 represent physical objects, such as humans or computers. It is noted that claim 1 further recites that the player definitions are **translated** into at least one codified script. The translating of the player definitions (which represent physical objects, such as humans or computers) into at least one codified script involves a **transformation** that satisfies the requirements of *In re Bilski*. *See In re Bilski*, 545 F.3d 943, 956 (Fed. Cir. 2008) (*en banc*). As held by *In re Bilski*, a "claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus <u>or</u> (2) it transforms a particular article into a different state or thing." *Id.* at 954.

As further specifically held by *In re Bilski*, a claim is not required to involve any transformation of the underlying physical object that data represents to satisfy the machine-or-transformation test. *Id.* at 963. As stated by *In re Bilski*, the transformation of data into another representation of a physical object was sufficient to satisfy the transformation test.

In the present claim, the data that is transformed includes the player definitions that define players (which are physical objects such as humans or computers). These player definitions are translated (transformed) into at least one codified script, which is then executed to

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produce useful results. It is thus clear that the claimed process is limited to a practical application of a principle to transform specific data that represents specific physical objects (players). *See id.* As articulated by *In re Bilski*, there is no danger here that the scope of the claim would wholly preempt all users of the principle. *Id.*

In view of the foregoing, it is clear that claim 1 recites statutory subject matter.

Independent claim 18 similarly recites statutory subject matter. Therefore, withdrawal of the § 101 rejection of the above claims is respectfully requested.

B. SECTION 101 REJECTION OF CLAIMS 10-17 AND 22

Independent claim 10 was rejected under § 101 as being directed to non-statutory subject matter based on the allegation that the apparatus of claim 10 includes solely software modules unrelated to computer-readable media. Appellant respectfully disagrees with this assessment of claim 10. Claim 10 recites an apparatus that comprises a business process definition module, a script translator module, and a simulation module. As depicted in Fig. 1 of the present specification, a script translation module 140, a simulation module 150, and a business model definition module are part of a business process modeling system. Specification, page 5, line 19. As would be understood by a person of ordinary skill in the art, such a system would have to be implemented in a computer or other hardware-based processing system. Therefore, it is respectfully submitted that the modules recited in claim 10 include hardware components (and possibly software components).

In view of the foregoing, it is respectfully submitted that claim 10 is directed to statutory subject matter.

Therefore, withdrawal of the § 101 rejection of the above claims is respectfully requested.

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C.   SECTION 112, ¶ 2, REJECTION OF CLAIMS 10-17 AND 22

Independent claim 10 was rejected under § 112, ¶ 2, as being indefinite based on the allegation that the apparatus claim is without structure and comprises solely software modules. As discussed above, such an allegation is incorrect. It is respectfully submitted that the modules of claim 10 would include at least hardware elements. Therefore, reversal of the § 112, ¶ 2, rejection is respectfully requested.

D.   SECTION 103 REJECTION OF CLAIMS 1-23

The § 103 rejection has already been addressed in the Appeal Brief.

In the final Office Action dated January 7, 2009, the Examiner stated that "[i]t was also old and well-known in the art of computer programming, specifically in the art of programming for automated economic means simulation, to use a scripting language to define and execute the simulation." 1/7/2009 Office Action at 7. As purported support for this allegation, the Examiner cited Jepsen. *Id.* However, in the Appeal Brief, Appellant pointed out why such allegation is incorrect.

In the Examiner's Answer dated December 16, 2009, the Examiner argued that "Official Notice is taken as old and well known in the art of computer programming, and specifically in the art of programming for automatic economic games simulation, to use a scripting language to define and execute the simulation." 12/16/2009 Office Action at 8. As purported support for the taking of "Official Notice," the Examiner again cited Jepsen.

The allegation that it is old and well known to use scripting language in the context of the present invention is clearly erroneous. Therefore, the taking of "Official Notice" is clearly improper. As explained in the Appeal Brief, Jepsen describes programming languages **in**

general. Page 71 of Jepsen refers to scripting languages. However, nowhere in Jepsen is there any hint that the scripting language described in Jepsen can be translated from player definitions that define a plurality of players and associated set of rules defining a possible decision space, a decision-making process tree, an information set, an outcome function, and a payoff function for each player.

In fact, none of the cited references provide any hint of translating player definitions into at least one codified script that is executed, as recited in claim 1. In fact, all the references cited by the Examiner indicate that a **predefined program**, and not scripts translated from player definitions, is used. The only possible reference to scripting language is provided by Jepsen, which refers to scripting language in general. There is no hint given in Jepsen of the subject matter of claim 1, namely of translating player definitions into at least one codified script.

In view of the foregoing and in view of the arguments presented in the Appeal Brief, it is respectfully submitted that the obviousness rejection is clearly erroneous.

Therefore, reversal of the § 103 rejection is respectfully requested in view of the arguments presented in the Appeal Brief.

E. CONCLUSION

In view of the foregoing, and in view of the arguments presented in the Appeal Brief,

reversal of all final rejections is respectfully requested.

Respectfully submitted,

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